

Application No.: 10/781014

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Docket No.: BGI-126CPCN

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in this application.

Listing of Claims

1-38. (Cancelled)

39. (Currently Amended) An isolated nucleic acid molecule selected from the group consisting of

- a) ~~an isolated nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:179, or the complement thereof,[[;]]~~
- b) ~~an isolated nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:180, or the complement thereof;~~
- c) ~~an isolated nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the entire nucleotide sequence of SEQ ID NO:179, wherein the nucleic acid molecule encodes a polypeptide having a phosphoenolpyruvate carboxykinase activity, or the complement thereof; and~~
- d) ~~an isolated nucleic acid molecule comprising a fragment of at least 25 contiguous nucleotides of the nucleotide sequence of SEQ ID NO:179, or the complement thereof.~~

40. (Currently Amended) An isolated nucleic acid molecule comprising the nucleic acid molecule of any one of claims 39 or 60-66 and a nucleotide sequence encoding a heterologous polypeptide.

41. (Currently Amended) A vector comprising the nucleic acid molecule of any one of claims 39 or 60-66.

42. (Previously Presented) The vector of claim 41, which is an expression vector.

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43. (Previously Presented) A host cell transfected with the expression vector of claim 42, wherein said host cell is a microorganism.

44. (Previously Presented) The host cell of claim 43, wherein said cell is a bacterial cell.

45. (Previously Presented) The host cell of claim 44, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium*.

46. (Previously Presented) A method of producing a polypeptide comprising culturing the host cell of claim 43 in an appropriate culture medium to, thereby, produce the polypeptide.

47. (Withdrawn – Currently Amended) A method for producing an amino acid fine chemical, comprising culturing the cell of claim 43 such that the amino acid fine chemical is produced.

48. (Withdrawn – Currently Amended) The method of claim 47, wherein said method further comprises the step of recovering the amino acid fine chemical from said culture.

49. (Withdrawn) The method of claim 47, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium*.

50. (Withdrawn – Currently Amended) The method of claim 47, wherein said cell is selected from the group consisting of *Corynebacterium glutamicum*, *Corynebacterium herculis*, *Corynebacterium*([.]) *lilium*, *Corynebacterium acetoacidophilum*, *Corynebacterium acetoglutamicum*, *Corynebacterium acetophilum*, *Corynebacterium ammoniagenes*, *Corynebacterium fujikense*, *Corynebacterium nitrilophilus*, *Brevibacterium ammoniagenes*,

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Brevibacterium butanicum, *Brevibacterium divaricatum*, *Brevibacterium flavum*,
Brevibacterium healii, *Brevibacterium ketoglutamicum*, *Brevibacterium ketosoreductum*,
Brevibacterium lactofermentum, *Brevibacterium linens*, *Brevibacterium paraffinolyticum*, and
those strains set forth in Table 3.

51. (Withdrawn – Currently Amended) The method of claim 47, wherein expression of the nucleic acid molecule from said vector results in modulation of production of said amino acid fine-chemical.

52. (Cancelled)

53. (Withdrawn – Currently Amended) The method of claim 47, wherein said fine-chemical is an amino acid is selected from the group consisting of lysine, glutamate, glutamine, alanine, aspartate, glycine, serine, threonine, methionine, cysteine, valine, leucine, isoleucine, arginine, proline, histidine, tyrosine, phenylalanine, and tryptophan.

54-56. (Cancelled)

57. (Withdrawn – Currently Amended) A method for diagnosing the presence or activity of *Corynebacterium diphtheriae* in a subject, comprising detecting the presence of at least one of the nucleic acid molecules of any one of claims 39 or 60-66, thereby diagnosing the presence or activity of *Corynebacterium diphtheriae* in the subject.

58-59. (Cancelled)

60. (Currently Amended) The nucleic acid molecule of claim 39, wherein the nucleic acid molecule comprises An isolated nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to the entire nucleotide sequence of SEQ ID NO:179, wherein the

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nucleic acid molecule encodes a polypeptide having a phosphoenolpyruvate carboxykinase activity, or the complement thereof.

61. (New) An isolated nucleic acid molecule comprising a nucleotide sequence which is at least 98% identical to the entire nucleotide sequence of SEQ ID NO:179, wherein the nucleic acid molecule encodes a polypeptide having a phosphoenolpyruvate carboxykinase activity, or the complement thereof.

62. (New) An isolated nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:180, or the complement thereof.

63. (New) An isolated nucleic acid molecule comprising a fragment of at least 25 contiguous nucleotides of the nucleotide sequence of SEQ ID NO:179, wherein the fragment encodes a polypeptide having a phosphoenolpyruvate carboxykinase activity, or the complement thereof.

64. (New) An isolated nucleic acid molecule consisting of a fragment of at least 25 contiguous nucleotides of the nucleotide sequence of SEQ ID NO:179, or the complement thereof.

65. (New) An isolated nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence which is at least 95% identical to the entire amino acid sequence of SEQ ID NO:180, wherein the polypeptide has a phosphoenolpyruvate carboxykinase activity, or the complement thereof.

66. (New) An isolated nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence which is at least 98% identical to the entire amino acid sequence of SEQ ID NO:180, wherein the polypeptide has a phosphoenolpyruvate carboxykinase activity, or the complement thereof.